

# Work Order ID 105417

\*105417\*

Page 1

August-01-13 11:34:58 AM

Item ID: D2600-5-108

Accept

\*N900040100\*

Setup Start \*NS1\*

Revision ID:

Stop \*NS2\*

Item Name: Extrusion 'I Beam' thin

Start Date: 8/01/13 Start Qty: 80.00

\*80\*

Cust Item ID:

Required Date: 8/01/13 Req'd Qty: 80.00

\*80\*

Customer:

Reference:

Approvals: Process Plan: MLJ Date: 13-08-01

Tooling: \_\_\_\_\_ Date: \_\_\_\_\_

Run Start \*NR1\*

QC: \_\_\_\_\_ Date: \_\_\_\_\_

SPC (Y/N): \_\_\_\_\_ Date: \_\_\_\_\_

Stop \*NR2\*

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
Draw Nbr	Revision Nbr								
D2600	E								

100

0.00

\*100\*

PURCHASING

Purchasing

Memo

0.00

Purchasing

Issuc P/O: 20829

a) Extrude as per Dwg D2600 (108" long)

b) Material: 6061-T6

c) Material certification is required.

\*\*\*EXTREME CARE MUST BE TAKEN TO PROTECT THE OUTSIDE SURFACE OF THE TUBE. THE OUTSIDE SURFACE MUST BE SMOOTH AND FREE FROM SURFACE DEFECTS SUCH AS SCRATCHES, NICKS, OR DENTS.\*\*\*

\*\*\*MUST BE WELL PACKAGE, IF NOT IT WILL BE REFUSE\*\*\*

C2 13/08/07 (80)

110

Receive & Inspect for Damage & Mat'l Certs

0.00

\*110\*

Packaging

Memo

0.00

Packaging

Ensure certification is attached

86x 80  
13-8-26

NCR: Yes / No

**WORK ORDER NON-CONFORMANCE / UPDATE**

DQA: \_\_\_\_\_ Date: \_\_\_\_\_

QA Closed: \_\_\_\_\_ Date: \_\_\_\_\_

Work Order: _____  Part No. _____  NCR No. _____	<b>DISPOSITION</b>  Rework <input type="checkbox"/> Scrap <input type="checkbox"/> Use-as-is <input type="checkbox"/> Work Order Update <input type="checkbox"/>	<b>AGAINST DEPARTMENT/PROCESS</b>  <table style="width: 100%;"> <tr> <td>Skid-tube <input type="checkbox"/></td> <td>Crosstube <input type="checkbox"/></td> <td>Water Jet <input type="checkbox"/></td> <td>Engineering <input type="checkbox"/></td> </tr> <tr> <td>Machining <input type="checkbox"/></td> <td>Small Fab <input type="checkbox"/></td> <td>Prod. Eng. Coord. <input type="checkbox"/></td> <td>Quality <input type="checkbox"/></td> </tr> <tr> <td>Thermoforming <input type="checkbox"/></td> <td>Finishing <input type="checkbox"/></td> <td>Rec/Store/Packaging <input type="checkbox"/></td> <td>Other <input type="checkbox"/></td> </tr> <tr> <td>Large Fab <input type="checkbox"/></td> <td>Composite <input type="checkbox"/></td> <td>Supplier <input type="checkbox"/></td> <td></td> </tr> </table>	Skid-tube <input type="checkbox"/>	Crosstube <input type="checkbox"/>	Water Jet <input type="checkbox"/>	Engineering <input type="checkbox"/>	Machining <input type="checkbox"/>	Small Fab <input type="checkbox"/>	Prod. Eng. Coord. <input type="checkbox"/>	Quality <input type="checkbox"/>	Thermoforming <input type="checkbox"/>	Finishing <input type="checkbox"/>	Rec/Store/Packaging <input type="checkbox"/>	Other <input type="checkbox"/>	Large Fab <input type="checkbox"/>	Composite <input type="checkbox"/>	Supplier <input type="checkbox"/>	
Skid-tube <input type="checkbox"/>	Crosstube <input type="checkbox"/>	Water Jet <input type="checkbox"/>	Engineering <input type="checkbox"/>															
Machining <input type="checkbox"/>	Small Fab <input type="checkbox"/>	Prod. Eng. Coord. <input type="checkbox"/>	Quality <input type="checkbox"/>															
Thermoforming <input type="checkbox"/>	Finishing <input type="checkbox"/>	Rec/Store/Packaging <input type="checkbox"/>	Other <input type="checkbox"/>															
Large Fab <input type="checkbox"/>	Composite <input type="checkbox"/>	Supplier <input type="checkbox"/>																

Root Cause	Date	Step	Qty	Description of work order update or Non-conformance	Initial Chief Eng	Action Description	Sign & Date	Verification	QC Inspector
Doc/Data									
Equip/Tooling									
Operator									
Material									
Setup									
Other									
Process									
Supplier									
Training									
Unapproved									

**FAULT CATEGORY**

Landing Gear	General	Other
<input type="checkbox"/> Bending	<input type="checkbox"/> Bend	<input type="checkbox"/> Grain
<input type="checkbox"/> Centre Not Concentric to O/S	<input type="checkbox"/> BOM/Route	<input type="checkbox"/> Hardware
<input type="checkbox"/> Cracks	<input type="checkbox"/> Broken/Damaged	<input type="checkbox"/> Inspection Incomplete
<input type="checkbox"/> Crushed/Crimped	<input type="checkbox"/> Burrs	<input type="checkbox"/> Instructions Incomplete/Unclear
<input type="checkbox"/> Cuffs	<input type="checkbox"/> Contamination	<input type="checkbox"/> Maintenance
<input type="checkbox"/> Heat Treat	<input type="checkbox"/> Countersink	<input type="checkbox"/> Misleading
<input type="checkbox"/> Inspection Strip in Tube	<input type="checkbox"/> Cut Too Short	<input type="checkbox"/> Misread
<input type="checkbox"/> Ripples in Bend	<input type="checkbox"/> Drill Holes	<input type="checkbox"/> Offset
<input type="checkbox"/> Torque Waves in Extrusion	<input type="checkbox"/> Drawing	<input type="checkbox"/> Out of Calibration
<input type="checkbox"/> Turning Sequence	<input type="checkbox"/> Finish	<input type="checkbox"/> Out of Sequence
<input type="checkbox"/> Wave/Twist in Tube	<input type="checkbox"/> Folio	<input type="checkbox"/> Outside Dimensions
		<input type="checkbox"/> Ovalized
		<input type="checkbox"/> Over/Under tolerance
		<input type="checkbox"/> Part Incorrect
		<input type="checkbox"/> Part Lost/Missing
		<input type="checkbox"/> Part Moved
		<input type="checkbox"/> Positioned Wrong
		<input type="checkbox"/> Power Loss/Surge
		<input type="checkbox"/> Pressure/Forced
		<input type="checkbox"/> Temperature/Cure
		<input type="checkbox"/> Weld
		<input type="checkbox"/> Wrong Stock Pulled
		<input type="checkbox"/> Other

# Work Order ID 105417

\*105417\*

Page 2

August-01-13 11:34:58 AM

Item ID: D2600-5-108

Accept

\*N900040100\*

Setup Start \*NS1\*

Revision ID:

Stop \*NS2\*

Item Name: Extrusion '1 Beam' thin

Start Date: 8/01/13 Start Qty: 80.00

\*80\*

Cust Item ID:

Required Date: 8/01/13 Req'd Qty: 80.00

\*80\*

Customer:

Reference:

Run Start \*NR1\*

Approvals: Process Plan: \_\_\_\_\_ Date: \_\_\_\_\_ Tooling: \_\_\_\_\_ Date: \_\_\_\_\_

Stop \*NR2\*

QC: \_\_\_\_\_ Date: \_\_\_\_\_ SPC (Y/N): \_\_\_\_\_ Date: \_\_\_\_\_

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
120	QC6- Inspect dimensions to drawing	0.00							
*120*									
QC	Memo	0.00							
Quality Control	2-Check Pull test per Dwg D2600 for compliance page attached. 3-Check hardness with Webster tester								
130	Identify as per dwg & Stock Location: <u>CG</u>	0.00							
*130*									
Packaging	Memo	0.00							
Packaging									
140	QC21- Final Inspection - Work Order Release	0.00							
*140*									
QC	Memo	0.00							
Quality Control									

13-08-27

NCR: Yes / No

## WORK ORDER NON-CONFORMANCE / UPDATE

DQA: \_\_\_\_\_ Date: \_\_\_\_\_

QA Closed: \_\_\_\_\_ Date: \_\_\_\_\_

Work Order: _____  Part No. _____  NCR No. _____	<b>DISPOSITION</b>  Rework <input type="checkbox"/> Scrap <input type="checkbox"/> Use-as-is <input type="checkbox"/> Work Order Update <input type="checkbox"/>	<b>AGAINST DEPARTMENT/PROCESS</b>  <table style="width: 100%;"> <tr> <td>Skid-tube <input type="checkbox"/></td> <td>Crosstube <input type="checkbox"/></td> <td>Water Jet <input type="checkbox"/></td> <td>Engineering <input type="checkbox"/></td> </tr> <tr> <td>Machining <input type="checkbox"/></td> <td>Small Fab <input type="checkbox"/></td> <td>Prod. Eng. Coord. <input type="checkbox"/></td> <td>Quality <input type="checkbox"/></td> </tr> <tr> <td>Thermoforming <input type="checkbox"/></td> <td>Finishing <input type="checkbox"/></td> <td>Rec/Store/Packaging <input type="checkbox"/></td> <td>Other <input type="checkbox"/></td> </tr> <tr> <td>Large Fab <input type="checkbox"/></td> <td>Composite <input type="checkbox"/></td> <td>Supplier <input type="checkbox"/></td> <td></td> </tr> </table>	Skid-tube <input type="checkbox"/>	Crosstube <input type="checkbox"/>	Water Jet <input type="checkbox"/>	Engineering <input type="checkbox"/>	Machining <input type="checkbox"/>	Small Fab <input type="checkbox"/>	Prod. Eng. Coord. <input type="checkbox"/>	Quality <input type="checkbox"/>	Thermoforming <input type="checkbox"/>	Finishing <input type="checkbox"/>	Rec/Store/Packaging <input type="checkbox"/>	Other <input type="checkbox"/>	Large Fab <input type="checkbox"/>	Composite <input type="checkbox"/>	Supplier <input type="checkbox"/>	
Skid-tube <input type="checkbox"/>	Crosstube <input type="checkbox"/>	Water Jet <input type="checkbox"/>	Engineering <input type="checkbox"/>															
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Large Fab <input type="checkbox"/>	Composite <input type="checkbox"/>	Supplier <input type="checkbox"/>																

Root Cause	Date	Step	Qty	Description of work order update or Non-conformance	Initial Chief Eng	Action Description	Sign & Date	Verification	QC Inspector
Doc/Data									
Equip/Tooling									
Operator									
Material									
Setup									
Other									
Process									
Supplier									
Training									
Unapproved									

### FAULT CATEGORY

Landing Gear	General	Other
<input type="checkbox"/> Bending	<input type="checkbox"/> Bend	<input type="checkbox"/> Grain
<input type="checkbox"/> Centre Not Concentric to O/S	<input type="checkbox"/> BOM/Route	<input type="checkbox"/> Hardware
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<input type="checkbox"/> Cuffs	<input type="checkbox"/> Contamination	<input type="checkbox"/> Maintenance
<input type="checkbox"/> Heat Treat	<input type="checkbox"/> Countersink	<input type="checkbox"/> Mislabeled
<input type="checkbox"/> Inspection Strip in Tube	<input type="checkbox"/> Cut Too Short	<input type="checkbox"/> Misread
<input type="checkbox"/> Ripples in Bend	<input type="checkbox"/> Drill Holes	<input type="checkbox"/> Offset
<input type="checkbox"/> Torque Waves in Extrusion	<input type="checkbox"/> Drawing	<input type="checkbox"/> Out of Calibration
<input type="checkbox"/> Turning Sequence	<input type="checkbox"/> Finish	<input type="checkbox"/> Out of Sequence
<input type="checkbox"/> Wave/Twist in Tube	<input type="checkbox"/> Folio	<input type="checkbox"/> Outside Dimensions
		<input type="checkbox"/> Ovalized <input type="checkbox"/> Over/Under tolerance <input type="checkbox"/> Part Incorrect <input type="checkbox"/> Part Lost/Missing <input type="checkbox"/> Part Moved <input type="checkbox"/> Positioned Wrong <input type="checkbox"/> Power Loss/Surge
		<input type="checkbox"/> Pressure/Forced <input type="checkbox"/> Temperature/Cure <input type="checkbox"/> Weld <input type="checkbox"/> Wrong Stock Pulled <input type="checkbox"/> Other

# Picklist Print

August-01-13 11:34:57 AM

Page 1

Work Order ID: 105417

Parent Item: D2600-5-108

Start Date: 8/01/13

Required Date: 8/01/13

Parent Item Name: Extrusion 'I Beam' thin

Start Qty: 80.00

Required Qty: 80.00

Comments: IPP F02.09.10Added DSK 066KJ/RF

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
D2600-5-108P Extrusion 'I Beam' thin		Purchased	No			110	Each	0.0000	1	80		8-13-13	

NCR: Yes / No

**WORK ORDER NON-CONFORMANCE / UPDATE**

DQA: \_\_\_\_\_ Date: \_\_\_\_\_

QA Closed: \_\_\_\_\_ Date: \_\_\_\_\_

Work Order: _____  Part No. _____  NCR No. _____	<b>DISPOSITION</b>  Rework <input type="checkbox"/> Scrap <input type="checkbox"/> Use-as-is <input type="checkbox"/> Work Order Update <input type="checkbox"/>	<b>AGAINST DEPARTMENT/PROCESS</b>  <table style="width: 100%;"> <tr> <td>Skid-tube <input type="checkbox"/></td> <td>Crosstube <input type="checkbox"/></td> <td>Water Jet <input type="checkbox"/></td> <td>Engineering <input type="checkbox"/></td> </tr> <tr> <td>Machining <input type="checkbox"/></td> <td>Small Fab <input type="checkbox"/></td> <td>Prod. Eng. Coord. <input type="checkbox"/></td> <td>Quality <input type="checkbox"/></td> </tr> <tr> <td>Thermoforming <input type="checkbox"/></td> <td>Finishing <input type="checkbox"/></td> <td>Rec/Store/Packaging <input type="checkbox"/></td> <td>Other <input type="checkbox"/></td> </tr> <tr> <td>Large Fab <input type="checkbox"/></td> <td>Composite <input type="checkbox"/></td> <td>Supplier <input type="checkbox"/></td> <td></td> </tr> </table>	Skid-tube <input type="checkbox"/>	Crosstube <input type="checkbox"/>	Water Jet <input type="checkbox"/>	Engineering <input type="checkbox"/>	Machining <input type="checkbox"/>	Small Fab <input type="checkbox"/>	Prod. Eng. Coord. <input type="checkbox"/>	Quality <input type="checkbox"/>	Thermoforming <input type="checkbox"/>	Finishing <input type="checkbox"/>	Rec/Store/Packaging <input type="checkbox"/>	Other <input type="checkbox"/>	Large Fab <input type="checkbox"/>	Composite <input type="checkbox"/>	Supplier <input type="checkbox"/>	
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Large Fab <input type="checkbox"/>	Composite <input type="checkbox"/>	Supplier <input type="checkbox"/>																

Root Cause	Date	Step	Qty	Description of work order update or Non-conformance	Initial Chief Eng	Action Description	Sign & Date	Verification	QC Inspector
Doc/Data									
Equip/Tooling									
Operator									
Material									
Setup									
Other									
Process									
Supplier									
Training									
Unapproved									

**FAULT CATEGORY**

Landing Gear	General	Other
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		<input type="checkbox"/> Ovalized
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		<input type="checkbox"/> Power Loss/Surge
		<input type="checkbox"/> Pressure/Forced
		<input type="checkbox"/> Temperature/Cure
		<input type="checkbox"/> Weld
		<input type="checkbox"/> Wrong Stock Pulled
		<input type="checkbox"/> Other

# SPECIFICATION CONTROL DRAWING

## D2600-X-XXX EXTRUSION

### NOTES:

- 1) MATERIAL: 6061-T6 ALUMINUM PER QQ-A-200/8 OR AMS-QQ-A-200/8 OR ASTM B221
- MINIMUM TENSILE YIELD STRENGTH = 35 KSI  
 MINIMUM ULTIMATE TENSILE STRENGTH = 40 KSI  
 MINIMUM ELONGATION = 8%
- A SAMPLE FROM EACH BATCH WILL BE PULL TESTED TO ASTM STANDARD B221 BY AN APPROVED TESTING FACILITY TO ENSURE THAT THE BATCH MEETS THE ABOVE MINIMUM MECHANICAL PROPERTIES
- 2) FINISH: N/A
- 3) TOLERANCES: PER DART OSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: IDENTIFY WITH DART P/N & B/N PER DART OSI 044 6.1 (FINE POINT PERMANENT INK MARKER)
- 7) WEIGHT: D2600-1 = 0.078 lb/in, D2600-3 = 0.130 lb/in, D2600-5 = 0.045 lb/in, D2600-7 = 0.091 lb/in
- 8) NO TOOLING MARKS
- 9) FOR D2600-1, PART NUMBER IS D2600-1-XXX WHERE XXX IS CUT LENGTH (EX. D2600-1-160 IS 160" LONG).  
 D2600-1 EXTRUSION MANUFACTURED FROM:
- CARADON INDALEX DIE # MH-18870
  - SIGNATURE ALUMINUM (BON-L) DIE # 897121
- 10) FOR D2600-3, PART NUMBER IS D2600-3-XXX WHERE XXX IS CUT LENGTH (EX. D2600-3-120 IS 120" LONG).  
 D2600-3 EXTRUSION MANUFACTURED FROM:
- CARADON INDALEX DIE # MH-18859
  - SIGNATURE ALUMINUM (BON-L) DIE # 897122
- 11) FOR D2600-5, PART NUMBER IS D2600-5-XXX WHERE XXX IS CUT LENGTH (EX. D2600-5-108 IS 108" LONG).  
 D2600-5 EXTRUSION MANUFACTURED FROM:
- CARADON INDALEX DIE # MS-18871
- 12) FOR D2600-7, PART NUMBER IS D2600-7-XXX WHERE XXX IS CUT LENGTH (EX. D2600-7-125 IS 125" LONG).  
 D2600-7 EXTRUSION MANUFACTURED FROM:
- CARADON INDALEX DIE # MS-18872

105417 MCT  
13-08-01

RELEASED  
2012-01-11

E	REFORMAT DWG. ALL DIMS & TOL. UPDATE TO MATCH MFG DIE DWGS; ADD ASTM B221 SPEC (D8-1)	CP	11.10.18
D	INCREASE MIN. UTS TO 40 KSI	DS	98.08.20
C	ADD D2600-3, UPDATE D2600-1 WIDTH, ADD DIE NO.	DS	98.04.16
B	CHANGE MATERIAL SPEC.	DS	97.09.09
A	NEW ISSUE	DS	97.01.21
REV.	DESCRIPTION	BY	DATE
DESIGN			
DRAWN			
CHECKED			
MFG. APPR.			
APPROVED			
DE APPR.			
DATE	11.10.18		

**DART AEROSPACE LTD**  
 HAWKESBURY, ONTARIO, CANADA

DRAWING NO. D2600  
 REV. E  
 SHEET 1 OF 3

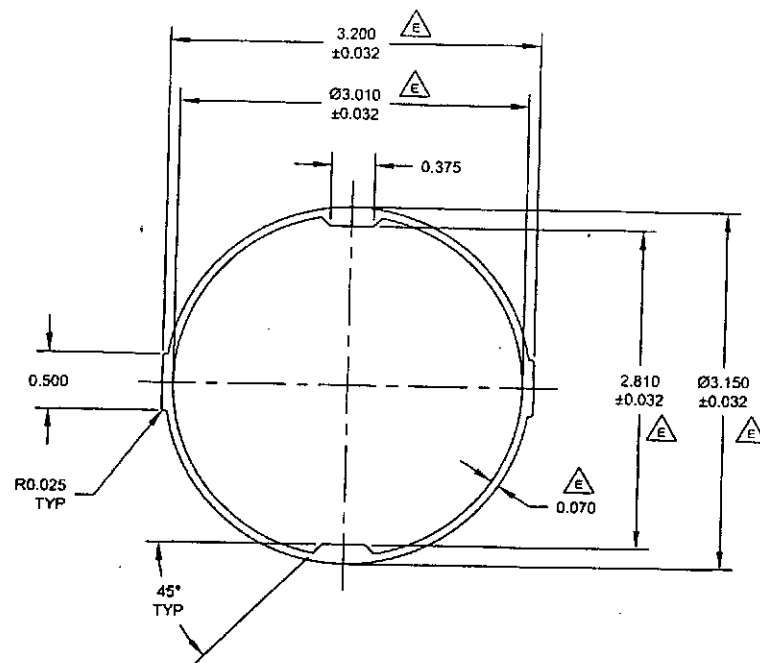
TITLE EXTRUSION  
 SCALE NTS

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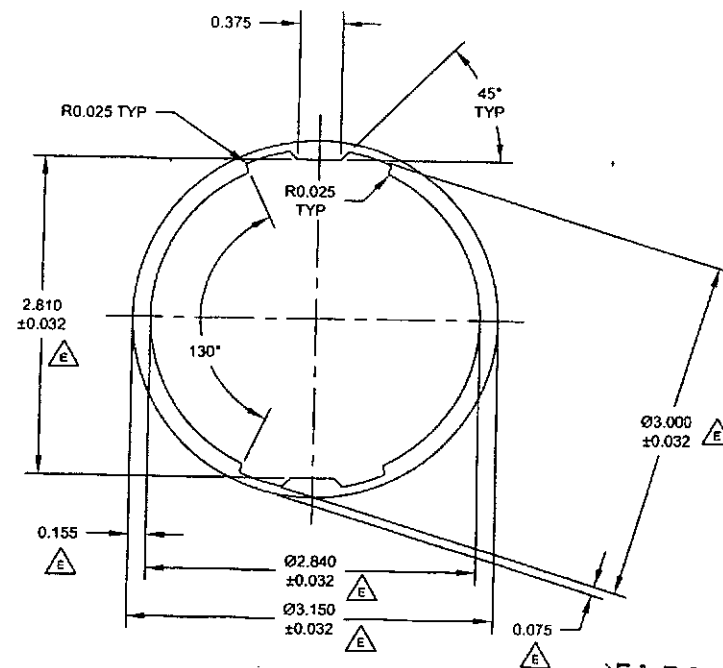




105417



D2600-1 EXTRUSION



D2600-3 EXTRUSION

RELEASED  
2012-01-10

DESIGN	<i>AS</i>	DART AEROSPACE LTD	
DRAWN	<i>AS</i>	HAWKESBURY, ONTARIO, CANADA	
CHECKED	<i>AS</i>	DRAWING NO.	REV. E
MFG. APPR.	<i>AS</i>	D2600	SHEET 2 OF 3
APPROVED	<i>AS</i>	TITLE	SCALE
DE APPR.	<i>AS</i>	EXTRUSION	NTS
DATE	11.10.18	COPYRIGHT © 1997 BY DART AEROSPACE LTD	
THIS DOCUMENT IS UNCLASSIFIED AND IS RELEASED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR REPRODUCED IN ANY FORM OR BY ANY MEANS WITHOUT THE WRITTEN PERMISSION FROM DART AEROSPACE LTD.			



DESIGN	<del>4</del>	<b>DART AEROSPACE LTD</b> HAWKESBURY, ONTARIO, CANADA  DRAWING NO. D2600  TITLE EXTRUSION  COPYRIGHT © 1997 BY DART AEROSPACE LTD <small>THIS DOCUMENT IS PRINTED AND COMPLETED AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIES OR COMMUNICATIONS TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD</small>	REV. E
DRAWN	<del>4</del>		SHEET 3 OF 3
CHECKED	ASS		
MFG. APPR.	EL		
APPROVED	<del>4</del>		SCALE
DE APPR.	<del>4</del>		NTS
DATE	11.10.18		



**VENDU À / SOLD TO**

EXPEDITE/SHIP TO

DART AEROSPACE LTD  
1270 ABERDEEN STREET  
HAWKESBURY, ONT

DART AEROSPACE LTD  
1270 ALBERTA STREET  
HAWKESBURY, ONT

MEME 'SAME

K6A1, K7

|K5A1K7

CUSTOMER P.S.T.: \*6122-5207

SAPA G.S.T. REG NO: R857314058

PROJ :

Required Dates:

**CERTIFIÉ**  
ISO 9001:2008

[illegible]

DATE DE LIVRAISON DATE SHIPPED		ENVOYÉ PAR SHIPPED VIA		OTTAWA 23 ADUT	
COMMANDE / ORDERED		CETTE EXPÉDITION / THIS SHIPMENT			MONTANT AMOUNT
POIDS WEIGHT	PIÈCES PIECES	BALLOTS BDLES.	POIDS WEIGHT	PCES / PCS.	
		1	219	112 POIDS	EN KGS
<p>6213-8-26</p>					

FORM 118XF REV 10/12

FEUILLE DE LA LIGERON  
DELIVERY SLIP

LES MARCHANDISES CI-DESSUS ONT ÉTÉ REÇUES EN BONNE ET DUE FORME  
THE ABOVE GOODS WERE RECEIVED IN GOOD ORDER

PAR / BY





Dart Aerospace Ltd.  
1270 Aberdeen Street  
Hawkesbury, ON K6A 1K7  
Tel: 613 632 9577  
Fax: 613 632 1053

## PURCHASE ORDER

Purchase Order ID PO20829

Purchase Order Date 8/7/2013

PO Print Date 8/7/2013

Page Number 1 of 1

Order From :

VC-SAP001

Ship To : DART AEROSPACE LTD

SAPA CANADA INC  
C/O 912420  
P.O. BOX 4090 STN A  
TORONTO, ONTARIO M5W OE9  
CANADA

1270 ABERDEEN  
HAWKESBURY, ON K6A 1K7  
CANADA

**FAKED**  
08/30/2013

Contact Name

Vendor Phone

800 563 5120

Ship To Contact

Ship To Phone

Ship Via:

Yours ppd

Ship Acct:

Buyer

Customer POID

Customer Tax #

Terms

Currency

FOB

Chantal Lavoie

10127-2607

Net 30

CAD

Destination-Collect

Line Nbr	Reference Vendor Part Number Line Comments Delivery Comments	Description/ Mfg ID	Req Date/ Taxable Promise Date	CD	Req Qty/ Unit of Measure	PO Unit Price	Extended Price
1	D2600-5-108P.	Extrusion 'I Beam' thin	8/23/2013 Yes 8/23/2013		80.00 Each	\$36.51	\$2,920.8

EXTRUDE AS PER DWG D2600 REV. E  
B105417

EXTREME CARE MUST BE TAKEN TO PROTECT THE OUTSIDE SURFACE OF TUBE  
MATERIAL MUST BE SMOOTH AND FREE FROM DEFECT SCRATCHES, NICKS, DENTS

8013-8-26

Line Total: \$2,920.8

PO Total: \$2,920.8

U CL

Note: Pricing listed above is as per contract agreement between Dart Aerospace and the respective manufacturer.  
No substitution or deviation without consent.  
Certificate of Conformity or Material Certification required - YES NO  
PST# 6122-5207

Change Nbr:

1

Change Date: 8/7/2013





325 rue Avro  
Pointe-Claire, QC, Canada H9R 5W3  
Téléphone (514) 697-5120  
Fac-simile (514) 694-8310

**sapa:**

## Rapport des propriétés mécaniques Mechanical Properties Test Report

Client / Customer : **DART AEROSPACE LTD**

Adresse / Address : **1270 ABERDEEN STREET  
HAWKESBURY ONT,  
K6A 1K7**

# commande Sapa / Sapa order # : **3080333**

# bon de commande / Purchase order # : **20829**

# de matrice / Die # : **MS 18871**

Description : **Light Duty Web D-2600-5**

Alliage & trempage / Alloy & temper : **6061 T6**

Customer Part # : **D2600-5-108P**

# Contrôle / Control # : **99511-1**

# Coulée / Cast # : **57593**

*366/26*

	Min.requis Min.required	Résultat actuel Actual results
Tension ultime Ultimate stress (psi)	38 000	41 947
Contrainte élastique Yield stress (psi)	35 000	35 322
% élongation dans 2" % elongation in 2"	8	11
Dureté Rockwell E (hre) Rockwell E Hardness (hre)	88 @ 100	89

Composition chimique typique / Typical chemical composition :

	Si	Fe	Cu	Mn	Mg	Cr	Zn	Ti
6063	0,20 - 0,60	0,35 Max	0,10 Max	0,10 Max	0,45 - 0,90	0,10 Max	0,10 Max	0,10 Max
6005	0,60 - 0,90	0,35 Max	0,10 Max	0,10 Max	0,40 - 0,60	0,10 Max	0,10 Max	0,10 Max
6005A	0,68 - 0,72	0,15 - 0,27	0,08 - 0,12	0,20 - 0,24	0,48 - 0,52	0,03 Max	0,05 Max	0,03 Max
6061	0,40 - 0,80	0,70 Max	0,15 - 0,40	0,15 Max	0,80 - 1,20	0,04 - 0,35	0,25 Max	0,15 Max
6351	0,7 - 1,3	0,5 Max	0,10 Max	0,40 - 0,80	0,40 - 0,80	---	0,20 Max	0,20 Max

Nous certifions que le matériel fourni rencontre les exigences chimiques telles qu'annoncées par la norme ASTM B-221-08 excepté pour la section 8.2 (nombre de spécimen) .

We hereby certify that the material supplied meets the chemical properties as published by the ASTM B-221-08 except for section 8.2 (number of specimen) .

Sincèrement vôtre,  
Yours truly,

date : **2013-08-14**



Gilles Pelletier  
Technicien de la qualité  
Quality technician

